METRIC

MIL-PRF-24792A
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SUPERSEDING
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PERFORMANCE SPECIFICATION

ADHESIVE, EPOXY, TWO PART, FIBER OPTICS

This specification is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements of a 100 percent solid epoxy adhesive for bonding optical fibers to metal and ceramic fiber optic connector and terminus ferrules.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

QQ-A-250/4 - Aluminum Alloy, 2024, Plate and Sheet.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA, 19111-5094.)

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, SEA 05Q, 2531 Jefferson Davis Highway, Arlington, VA 22242-5160 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 6070

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D542 - Standard Test Method for Index of Refraction of Transparent Organic Plastics. (DoD adopted)
ASTM D570 - Standard Test Method for Water Absorption of Plastics. (DoD adopted)
ASTM E595 - Standard Test Method for Total Mass Loss and Collected Volatile Condensable Materials from Outgassing in a Vacuum Environment. (DoD adopted)
ASTM D696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics, Between –30 °C and 30 °C. (DoD adopted)
ASTM D1002 - Standard Test Method for Strength Properties of Adhesives in Shear by Tension Loading (Metal to Metal). (DoD adopted)
ASTM D2240 - Standard Test Method for Rubber Property - Durometer Hardness. (DoD adopted)
ASTM D2393 - Standard Test Method for Viscosity of Epoxy Resins and Related Components. (DoD adopted)
ASTM D2471 - Standard Test Method for Gel Time and Peak Exothermic Temperature of Reacting Thermosetting Resins. (DoD adopted)
ASTM D2566 - Standard Test Method for Linear Shrinkage of Thermosetting Casting Systems During Cure.
ASTM D3418 - Standard Test Method for Transition Temperatures of Polymers by Thermal Analysis. (DoD adopted)

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

ELECTRONIC INDUSTRIES ASSOCIATION/TELECOMMUNICATIONS INDUSTRY ASSOCIATION (EIA/TIA)

TIA/EIA-455-5 - Humidity Test Procedure for Fiber Optic Components. (DoD adopted)
TIA/EIA-455-71 - Procedure to Measure Temperature-Shock Effects on Fiber Optic Components.
TIA/EIA-604-2 - FOCIS 2, Fiber Optic Connector Intermateability Standard.

(Application for copies should be addressed to the Telecommunications Industry Association, 2500 Wilson Boulevard, Arlington, Virginia, 22201.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents may also be available in or through libraries or other informational services.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.4.

3.2 Materials. The cured adhesive material shall not produce toxic, corrosive, or explosive by-products. For safety of the material, all materials are subject to a toxicological and formulations review and inspection by the Government.

3.2.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements and promotes economically advantageous life cycle costs.

3.3 Composition. The adhesive shall be a two-component, 100 percent solid, epoxy adhesive.

3.4 Performance requirements. The performance requirements shall be defined in terms of the mechanical, environmental, and chemical properties.

3.4.1 Viscosity (see 4.6.1). Each adhesive component shall have a viscosity as specified in table I.

TABLE I. Adhesive viscosity.

Item	Viscosity (cps)1/ at +25 °C
Part A (resin)	1,000 to 10,000
Part B (hardener)	300 to 5,000

1/ Centipoise.

3.4.2 Shelf life (see 4.6.2). The unmixed adhesive components shall have a shelf life not less than 24 months at +25 °C ± 5 °C (see 6.6). The 24-month period commences on the date of the adhesive component manufacture. The unmixed adhesive components shall meet the requirements of 3.4.1. When cured in accordance with 3.4.5, the adhesive shall meet the requirements of 3.4.7, 3.4.8, 3.4.9, and 3.4.17 (space application only).

3.4.3 Storage temperature (see 4.6.2). The unmixed adhesive shall be capable of storage at temperatures from -40 °C to +85 °C. After storage, the unmixed adhesive components shall meet the requirements of 3.4.1. When cured in accordance with 3.4.5, the adhesive shall meet the requirements of 3.4.7, 3.4.8, and 3.4.9.

3.4.4 Pot life (see 4.6.3). The mixed adhesive shall have a working life not less than 30 minutes at +25 °C ± 5 °C. Throughout the working life, the adhesive shall be dispensable through a syringe needle with a 0.91-mm (.04 inch) outer diameter.

3.4.5 Cure schedule (see 4.6.4). The mixed adhesive shall meet the requirements of 3.4.6, 3.4.7, 3.4.8, 3.4.9, 3.4.11, 3.4.12, 3.4.13, and 3.4.17 (space application only), when cured as specified (see 6.5 and table VIII).

3.4.6 Linear shrinkage (see 4.6.5). When cured in accordance with 3.4.5, the adhesive shall have a linear shrinkage of not greater than 1 percent.

3.4.7 Hardness (see 4.6.6). When cured in accordance with 3.4.5, the adhesive shall have a Shore D hardness not less than 65.

3.4.8 Bond strength (see 4.6.7). When cured in accordance with 3.4.5, the adhesive shall have a bond strength not less than 10.3 megapascals (MPa) (1,500 psi) at a temperature of +25 °C ± 5 °C.

3.4.9 Glass transition temperature (see 4.6.8). When cured in

accordance with 3.4.5, the adhesive shall have a glass transition temperature not less than +85 °C.

3.4.10 Index of refraction (see 4.6.9). The adhesive shall have an index of refraction not less than 1.500.

3.4.11 Coefficient of linear thermal expansion (see 4.6.10). When cured in accordance with 3.4.5, the adhesive shall have a coefficient of linear thermal expansion not greater than 110 x 10^{-6} mm/°C.

3.4.12 Temperature (see 4.6.10). When cured in accordance with 3.4.5, and after exposure to non-operating temperature extremes between -40 °C and +85 °C, the adhesive shall meet the requirements of 3.4.11 when exposed to operating temperature extremes between -28 °C and +85 °C.

3.4.13 Water absorption (see 4.6.11). When cured in accordance with 3.4.5, the adhesive shall absorb an amount of water not greater than 0.5 percent of the adhesive weight.

3.4.14 Identification and marking (see 4.6.12). All containers shall be marked. The markings shall be permanent, clearly visible, and legible. Marking information shall include the PIN, CAGE code, manufacturer's name, lot number, and date of manufacture.

3.4.15 Workmanship (see 4.6.13). All adhesive material shall be uniform in quality and free from foreign material or any defects detrimental to the fabrication or performance of the adhesive.

3.4.16 Connector compatibility (see 4.6.14). The adhesive shall securely hold an optical fiber within a fiber optic connector. The adhesive shall restrict axial movement of the optical fiber to less than ±0.2 µm with respect to the fiber optic connector ferrule.

3.4.17 Outgassing (see 4.6.15) (space applications only). The cured adhesive shall have a total mass loss (TML) of ≤ 1 percent and a collected volatile condensable material (CVCM) of ≤ 0.1 percent.

3.5 Shipping. Adhesive material shall not be shipped on any order to this specification if the shipping date is greater than 90 days from the manufacturing date.

4. QUALITY ASSURANCE PROVISIONS

4.1 General. Material delivered to this specification shall meet all requirements herein. The manufacturer shall perform the necessary tests and inspections in order to insure compliance with this specification.

4.1.1 Test equipment and inspection facilities. Requirements for test equipment and inspection facilities shall be as identified in the contract (see 6.3.1).

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. First contract inspection (see 4.3).
b. First article inspection (see 4.4).
c. Quality conformance inspection (see 4.5).

4.3 First contract inspection. First contract inspection (see 6.4.2) is applicable only on the first acquisition of a particular product under this specification. First contract inspections shall consist of the tests listed in table II and shall be conducted in conjunction with first article inspections. The material submitted for testing shall be representative of the production process.

TABLE II. First contract inspection.

Inspection	Requirement	Test	Sample size
Identification and marking	3.4.14	4.6.12	All units
Index of refraction	3.4.10	4.6.9	1/
Water absorption	3.4.13	4.6.11	2/
Connector compatibility	3.4.16	4.6.14	3 connector assemblies

1/ Three specimens shall be used from units selected at random from the first contract sample. The specimens shall be uncured.
2/ Three specimens shall be used from units selected at random from the first contract sample. The specimens shall have been cured in accordance with 3.4.5.

4.3.1 Sample. The sample submitted shall be a number of units of the same PIN, sufficient to complete all of the inspections.

4.3.2 Inspection routine. The sample shall be subjected to the inspections specified in table II, in the order shown. The tests identified in table II may be performed at the same time as the tests identified in table III.

4.3.3 Failures. One or more failures shall constitute first contract inspection failure.

4.4 First article inspection. First article inspection shall consist of all the tests listed in table III. The material submitted for testing shall be representative of the production process.

4.4.1 Sample. The sample submitted shall be a number of units of the same PIN, sufficient to complete all of the inspections.

4.4.2 Inspection routine. The sample shall be subjected to the inspections specified in table III, in the order shown.

4.4.3 Failures. One or more failures shall constitute first article inspection failure.

TABLE III. First article inspection.

Inspection	Requirement	Test	Sample size
Identification and marking	3.4.14	4.6.12	All units
Workmanship	3.4.15	4.6.13	All units
Viscosity	3.4.1	4.6.1	1/
Shelf life	3.4.2	4.6.2	2/
Storage temperature	3.4.3	4.6.2	3/
Pot life	3.4.4	4.6.3	1/
Cure schedule	3.4.5	4.6.4	4/
Linear shrinkage	3.4.6	4.6.5	5/
Hardness	3.4.7	4.6.6	5/
Bond strength	3.4.8	4.6.7	5/
Glass transition temperature	3.4.9	4.6.8	5/
Coefficient of linear thermal expansion	3.4.11	4.6.10	5/
Temperature	3.4.12	4.6.10	6/
Outgassing	3.4.17	4.6.15	1/

1/ Three specimens shall be used from units selected at random from the first article sample.
2/ Twelve specimens shall be used from units selected at random from the first article sample.
3/ The same specimens shall be used as are used in the shelf life inspection.
4/ Fifteen specimens shall be used from units selected at random from the first article sample.
5/ Three specimens shall be used selected from the specimens used in the cure schedule inspection.
6/ The same specimens shall be used as are used in the coefficient of linear thermal expansion inspection.

4.5 Quality conformance inspection. Quality conformance inspection shall consist of the inspections and tests specified for group A inspection (table IV), group B inspection (table V) and group C inspection (table VI), as specified (see 6.2). Requirements for alternate forms of conformance inspection shall be as identified in the contract (see 6.3.2).

4.5.1 Group A inspection. Group A inspection shall consist of the tests listed in table IV, conducted in the order shown.

TABLE IV. Group A inspection.

Inspection	Requirement	Test
Identification and marking	3.4.14	4.6.12

4.5.1.1 Sampling plan. Group A inspections shall be performed on 100 percent of the product supplied under this specification.

4.5.1.2 Failures. One or more failures shall constitute group A inspection failure of the sample unit.

4.5.1.3 Disposition of sample units. Samples that have failed group A inspection shall not be shipped or submitted for group B testing.

4.5.2 Group B inspection. Group B inspection shall consist of the tests listed in table V, conducted in the order shown. Group B inspections shall be made on sample units that have passed group A inspection.

TABLE V. Group B inspection.

Inspection	Requirement	Test
Workmanship	3.4.15	4.6.13
Cure schedule	3.4.5	4.6.4
Hardness	3.4.7	4.6.6
Bond strength	3.4.8	4.6.7

4.5.2.1 Sampling plan. A minimum of three sample units shall be selected from each lot of material supplied under this specification.

4.5.2.2 Failures. One or more failures shall constitute group B inspection failure of the lot.

4.5.2.3 Rejected lots. Requirements regarding the rework of rejected lots shall be as identified in the contract (see 6.8.1).

4.5.2.4 Disposition of sample units. Samples that have failed group B inspection shall not be shipped or submitted for group C testing.

4.5.3 Periodic inspection. Periodic inspection shall consist of group C inspection. Except where the results of these inspections show noncompliance with the applicable test requirements (see 4.5.3.1.4), delivery of products which have passed group B shall not be delayed pending the results of these first article verification inspections.

4.5.3.1 Group C inspection. Group C inspection shall consist of the inspections specified in table VI, in the order shown. Group C inspections shall be made on units that have passed the group B inspection.

4.5.3.1.1 Sampling plan. Every 60 months, a number of units of the same PIN, sufficient to complete all of the inspections, which have passed group B inspection, shall be selected.

4.5.3.1.2 Failures. One or more specimen or sample unit failures shall constitute group C inspection failure.

4.5.3.1.3 Disposition of sample units. Sample units that have been submitted to group C inspection shall not be shipped.

4.5.3.1.4 Noncompliance. Requirements regarding failure of group C inspection shall be as identified in the contract (see 6.8.2).

TABLE VI. Group C inspection.

Inspection	Requirement	Test
Viscosity	3.4.1	4.6.1
Shelf life	3.4.2	4.6.2
Storage temperature	3.4.3	4.6.2
Pot life	3.4.4	4.6.3
Linear shrinkage	3.4.6	4.6.5
Glass transition temperature	3.4.9	4.6.8
Coefficient of linear thermal expansion	3.4.11	4.6.10
Temperature	3.4.12	4.6.10
Outgassing	3.4.17	4.6.15

4.6 Methods of inspection.

4.6.1 Viscosity (see 3.4.1). Each adhesive component and the mixed adhesive shall be tested, using a viscometer, in accordance with ASTM D2393 and table VII or equivalent.

TABLE VII. Viscometer specifications.

Item tested	Spindle	Speed
Resin	7	20
Hardener	5	4

4.6.2 Shelf life/storage temperature (see 3.4.2 and 3.4.3). The unmixed adhesive components shall be exposed to a temperature of +85 °C ± 2 °C for 150 hrs. After exposure, part of the unmixed adhesive components shall be subjected to the test specified in 4.6.1. The remainder shall be cured in accordance with 3.4.5, and subjected to the tests specified in 4.6.6, 4.6.7, 4.6.8, and 4.6.15 (space application only).

4.6.3 Pot life (see 3.4.4). Four grams of the mixed material shall be inserted into a syringe and the requirements of 3.4.4 periodically verified.

4.6.4 Cure schedule (see 3.4.5). The adhesive components shall be mixed, and cured in accordance with 3.4.5 (see 6.5 and Table VIII). The quantities of adhesive cured shall be as required to complete the tests specified in 4.6.5, 4.6.6, 4.6.7, 4.6.8, 4.6.10, and 4.6.11. During cure, the adhesive shall be subjected to the test specified in 4.6.5. The cured adhesive shall then be subjected to the tests specified in 4.6.6, 4.6.7, 4.6.8, 4.6.10, 4.6.11, and 4.6.15 (space application only).

4.6.5 Linear shrinkage (see 3.4.6). The adhesive shall be tested in accordance with ASTM D2566 or equivalent.

4.6.6 Hardness (see 3.4.7). A 24-gram slab of cured adhesive shall be tested in accordance with ASTM D2240.

4.6.7 Bond strength (see 3.4.8). The cured adhesive shall be tested in accordance with ASTM D1002, using acid etched aluminum bars (QQ-A-250/4).

4.6.8 Glass transition temperature (see 3.4.9). The cured adhesive shall be tested in accordance with ASTM D3418, using a Differential Scanning Calorimeter or equivalent.

4.6.9 Index of refraction (see 3.4.10). The adhesive shall be tested in accordance with ASTM D542 or equivalent.

4.6.10 Coefficient of linear thermal expansion (see 3.4.11 and 3.4.12). The cured adhesive shall initially be soaked at both -40 °C and +85 °C for one hour each. The cured adhesive shall then be tested in accordance with ASTM D696 or equivalent. The test shall be performed at 11 equally spaced temperatures spanning the operating temperature range specified in 3.4.12.

4.6.11 Water absorption (see 3.4.13). The cured adhesive shall be tested for 24 hours in accordance with ASTM D570 or equivalent.

4.6.12 Identification and marking (see 3.4.14). The adhesive containers shall be visually examined for conformance with the requirements of 3.4.14.

4.6.13 Workmanship (see 3.4.15). The adhesive components shall be visually examined for conformance with the requirements of 3.4.15.

4.6.14 Connector compatibility (see 3.4.16). The adhesive components shall be mixed and used in the assembly of a 62.5/125/900-µm optical fiber into a TIA/EIA-604-2 compliant fiber optic connector, utilizing a zirconia ferrule. The connector shall be assembled in accordance with the manufacturer's instructions, except that the adhesive shall be cured in accordance with 3.4.5, and the connector shall not be crimped to the 900-µm fiber. NOTE: Finely polished connector end faces will allow more accurate fiber position measurements (see 4.6.14.1 and 4.6.14.3). The connector assembly shall be exposed to the tests specified in 4.6.14.1 through 4.6.14.3, in the order listed.

4.6.14.1 Thermal shock. The connector assembly shall be tested in accordance with TIA/EIA-455-71, using test condition C-0. The low and high temperatures shall be -40 °C and +85 °C, respectively. Before the test, the connector assembly shall be examined for fiber position, using a profilometer or an optical interferometer.

4.6.14.2 Temperature/humidity cycling. The connector assembly shall be tested in accordance with TIA/EIA-455-5, method B. The subcycle shall be included in the test.

4.6.14.3 Fiber pull out. The connector assembly shall be tested by applying a tensile force of 14.0 N (3.1 pounds) on the 900-µm fiber for one minute. After the test, the connector assembly shall be examined for fiber position, using a profilometer or an optical interferometer.

4.6.15 Outgassing (see 3.4.17). The cured adhesive shall be tested in accordance with ASTM E595.

5. PACKAGING

(Packaging requirements specified herein apply only for direct Government procurement.)

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DOD personnel, those personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or from the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature which may be helpful, but is not mandatory.)

6.1 Intended use. The adhesive covered by this specification is intended for use with fiber optic connectors in fixed plant, tactical, shipboard, aerospace, and spaceflight applications.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.
b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of the individual documents referenced (see 2.1).
c. Type of adhesive primary packaging required (cans; tubes; premeasured 2-gram, 4-gram, or 8-gram packages; frozen premixed).
d. Type of adhesive secondary packaging required (none, airtight bags, airtight canisters).
e. Requirements for test and inspection facilities (see 6.3.1).
f. Requirements for alternate forms of conformance testing (see 6.3.2).
g. Requirements regarding rework of rejected lots (see 6.8.1).
h. Requirements regarding failure of group C inspection (see 6.8.2).
i. Is Material Safety Data Sheet required? (See 6.7)

6.3 First article. When first article inspection is required, the items should be a first article sample. The first article should consist of a minimum of 4 units. The contracting officer should also include specific instructions, in acquisition documents, regarding arrangements for examinations, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection for those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Unless specifically requested to do so in the solicitation, bidders should not submit alternate bids.

6.3.1 Test equipment and inspection facilities. The contractor is responsible for providing test measuring equipment and inspection facilities of sufficient accuracy, quality, and quantity to permit performance of the required inspections. The establishment and maintenance of a calibration system to control the accuracy of the measuring and test equipment must be in accordance with ANSI/NCSL Z540-1.

6.3.2 Alternate forms of conformance inspection. Requests for alternate forms of conformance inspection must be submitted to the contracting officer. Alternate forms of quality conformance inspection may be used upon written approval by the contracting officer.

6.4 Definitions. Definitions of terms should be in accordance with TIA/EIA-440 and the following subparagraphs.

6.4.1 First contract. The first contract is considered to be the first contract under which a manufacturer's material is supplied to any acquiring activity under this specification.

6.4.2 First contract inspection. First contract inspections are inspections required in addition to first article inspections for the first contract in which this specification is invoked. First contract inspections are intended to evaluate basic material properties that are primarily a function of the product formulation, not the product manufacturing process.

6.5 Part or identifying number (PIN). The PIN for this adhesive should consist of the basic specification number, a one character cure schedule identifier, and an optional space flight application identifier as shown in the following example:

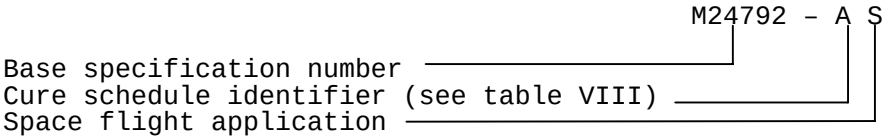

TABLE VIII. Cure schedule identifiers.

Cure schedule identifier	Cure schedule
A	10 ±1 minutes at +120 °C ± 3 °C
B	10 ±1 minutes at +100 °C ± 3 °C
C	2 ±1 minutes at +25 °C ± 3 °C

6.6 Shelf life. Products acquired to this specification should not be used for fiber optic termination purposes, under any conditions, if the date of manufacture has passed by more than 24 months. If products acquired to this specification are exposed to temperatures higher than the temperatures specified in 3.4.2, the shelf life may be decreased, and the manufacturer should be contacted to determine the appropriate shelf life under the actual storage conditions. Storage conditions should never exceed the temperature specified in 4.6.2.

6.7 Material safety data sheet (MSDS). The adhesive covered by this specification contains material(s) which may be hazardous to personnel. A material safety data sheet (MSDS) is needed for employee safety programs. Contracting officers will identify those activities requiring copies of completed MSDSs, prepared in accordance with FED-STD-313. In order to obtain the MSDS, Federal Acquisition Regulations (FAR) clause 52.223-3 must be in the contract.

6.8 Conformance inspection.

6.8.1 Rejected lots. If a group B inspection lot is rejected, the contractor may rework it to correct the defects, or screen out the defective units (if applicable), and resubmit the lot for inspection.

6.8.2 Noncompliance. If a sample fails to pass group C inspection, the contractor must do the following:

a. Notify the contracting activity of the failure.
b. Take corrective action on the materials and processes as warranted.
c. Take corrective action on all units of the product which

(1) Can be corrected,
(2) Were manufactured under essentially the same conditions, with essentially the same materials and processes, and
(3) Are considered subject to the same failure.

Acceptance of the product will be discontinued until corrective action, acceptable to the contracting activity has been taken. After the corrective action has been taken, group C inspection must be repeated on additional sample units (all inspection tests or the inspection test which the original sample failed, at the option of the contracting activity). Group A and group B inspections may be reinstituted; however, final acceptance will be withheld until the group C inspection has shown that the corrective action was successful.

6.9 Subject term (key word) listing.

Bonding optical fibers
Connectors
Cured adhesive components
Epoxy adhesive
Shelf life

Custodians:
Army - CR
Navy – SH
NASA – NA

Review activities:
Army – MI
Navy - AS
Air Force – 13, 19, 33, 85, 90, 93, 99
DLA - CC

Preparing Activity:
Navy – SH

Agent:
DLA – CC
(Project 6070-0003)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.

2. The submitter of this form must complete blocks 4, 5, 6, and 7, and send to preparing activity.

3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	**1. DOCUMENT NUMBER** MIL-PRF-24792A	**2. DOCUMENT DATE (YYYYMMDD)** 19991001

3. DOCUMENT TITLE **ADHESIVE, EPOXY, TWO PART, FIBER OPTICS**

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*	b. ORGANIZATION	
c. ADDRESS *(Include Zip Code)*	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON *(if applicable)*	**7.DATE SUBMITTED** (YYYYMMDD)

8. PREPARING ACTIVITY

a. NAME NAVAL SEA SYSTEMS COMMAND	b. TELEPHONE *Include Area Code)* (1) Commercial (703) 602-7748 (2) AUTOVON 332-7748
c. ADDRESS *(Include Zip Code)* COMMANDER, NAVAL SEA SYSTEMS COMMAND, ATTN: SEA 03Q, 2531 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA 22242-5160	**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:** Defense Standardization Program Office (DLSC-LM) 8725 John J. Kingman road, Suite 2533, Ft. Belvoir, VA 22060-2533 Telephone (703) 767-6888 AUTOVON 427-6888